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Does political pressure matter in bank lending?

Evidence from China

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ABSTRACT

Using provincial data from China between 2002 and 2011, we find substantial evidence indicating a positive association between the growth of bank loans issued by commercial banks and the political pressures faced by provincial leaders. This association is particularly true for state-owned banks, which are much more politically pressurized than others, but is relatively attenuated in provinces with a more developed banking sector. We also find that bank loans issued under greater political pressures are less commercially oriented and have lower quality. Our findings are robust to a variety of sensitivity analyses and alternative measures of political pressure. Overall, our study contribute to a growing literature emphasizing the role of the political incentives of government officials in fuelling economic growth through credit allocation.

Keywords: Political pressure; bank lending; loan quality; China

“Why does China have a GDP target at all? ... The reasons are political. In a country so large, central leaders are always fearful of losing their grip on far-flung bureaucrats: setting GDP targets is one means by which they believe can evaluate and control these lower down.”

— *“Grossly deceptive plans”, The Economist, January 30th 2016 issue*

1. Introduction

On January 19th 2016, China declared its latest gross domestic product (GDP) growth figure – 6.9% in 2015. Perhaps, not surprisingly, this is neatly within the government’s target of “around 7%”. China is the only large industrial country that sets GDP targets and influence, or even control, the economy in order to achieve that. In the government’s five-year plan, the central government establishes for all provinces their GDP growth target, which is usually the most important assessment criteria for local political leaders.¹ If the real GDP growth rate fails to meet or overachieve the goals, local officials would face enormous political pressures, and their political future could even be diminished.

In this paper, we study the role of government in the economy of China by examining whether/how the political pressures upon local officials affect the growth of bank loans issued by commercial banks. Since most of the assessment criterion are descriptive and unmeasurable² and, more importantly, given the significance of GDP targets in China’s distinctive political system, we measure political pressures upon provincial leaders as the shortfalls of the actual GDP growth of each province to its target GDP growth or the average GDP growth of its adjacent provinces. It is well argued in the literature that the GDP growth rate is a major political concerns for Chinese government officials (e.g., Rawski, 2001; Chow, 2004; Li and Zhou, 2005; Burdekin and Siklos, 2008) and could significantly affects the turnover decisions made by the central government (Chen et al., 2005). In particular, we believe that local officials are facing considerably high political pressures if the above measures are

¹ In this paper, we use local officials, political leaders, and provincial leaders interchangeably.

² In China local officials are often judged by environmental standards, social policies, being uncorruptive, in tune with the party’s direction, and etc. But GDP is the most important assessment criterion because it is measureable and observable.

positive and, therefore, they are more likely to take proactive measures to stimulate the provincial economy.

There is an ongoing debate regarding the role of government in the economy and financial markets. On the one side, the *development view* suggests that government intervention in financial markets promote economic development by channelling credit to the sectors of economy prioritized by the governments. However, this view is less supported by previous studies (e.g., Beck and Levine, 2002; Caprio and Peria, 2002; La Porta et al., 2002), which consistently show a negative relation between government intervention and economic growth. On the opposite side, the *political view* emphasizes the political objectives of government intervention in financial markets (e.g., La Porta et al., 2002; Brown and Dinc, 2005; Dinc, 2005) and argues that politicians in power are inclined to exploit financial resources, particularly those owned or controlled by the government, to appease their supporters who subsequently return the favour through voting, political contributions and bribes (e.g., Kornai, 1979; Shleifer and Vishny, 1994). Despite the accumulated empirical evidence supporting the *political view*, there has been limited research on politically motivated and driven actions taken by commercial banks in terms of bank loans.

We choose China to investigate our research question because the problem of political intervention is expected to be greater in China as compared with other emerging economies. First, despite the significant economy reform and remarkable economic development, China's central and local government maintain substantial influences over the overall economy by controlling the allocation of key economic resources, like land and credit.³ Second, China's rapid growth is mainly attributed to the globalization of trade, but China has yet to globalize its banking sector (Berger et al., 2009). China's banking sector remains dominated by four colossal state-owned banks (i.e., the Big Four banks)⁴, which account for about three-quarters of industry assets. Finally, China features the coexistence of political centralization and fiscal

³ The power of China's governments in controlling economics resources distinguishes her from other ex-communist transitional economics such as Russia (Chen et al., 2005; Lee et al., 2014).

⁴ They are the Industrial and Commercial Bank of China (ICBC), the China Construction Bank (CCB), the Agricultural Bank of China (ABC), and the Bank of China (BOC).

decentralization. Specifically, the personnel management of provincial leaders is solely controlled by the central government, and the provincial economic performance is a crucial indicator in personnel evaluation. As such, the central government rewards and punishes local officials through a yardstick competition on the basis of regional economic performance (Qian and Xu, 1993; Maskin et al., 2000; Li and Zhou, 2005).⁵

Using provincial data from 2002 to 2011, we find that the growth rate of bank loans increases with the political pressure on local officials. This relation is significant and robust when controlling for macroeconomic factors as well as the personal characteristics of provincial leaders. Intuitively, our results indicate that provincial leaders have stronger influences on the state-owned banks, while other domestic and foreign banks don't seem to be affected. Moreover, the uneven institutional development across regions in China allows us to examine the extent to which the association is affected by the degree of banking marketization. Our results show that the impact of political pressures on the growth of bank loans is moderated in regions with a higher level of banking marketization, suggesting that economic liberalization is effective in preventing government intervention in financial institutions.

We then shift our focus to the efficiency of bank lending and the quality of bank loans. Following Podpiera (2006), we define efficiency as the sensitivity of lending growth rate to provincial profitability. Our results show that bank lending is less commercially oriented (a higher sensitivity level) and have much lower quality when local officials are facing greater political pressures. Overall, these results confirm our inferences drawing on the *political view* that the government forces banks to increase lending to serve their politically agenda rather than to achieve greater economic objectives, and loans issued under such circumstance suffer lower efficiency and quality.

We conduct a number of robustness checks to test the validity of our results. First, we repeat the main analyses using the excessive growth of bank loans as the dependent variable, and our results remain unchanged. Second, we find that a province

⁵ The political motives of Chinese local officials arise mainly from political pressure empowered by the performance-based promotion scheme rather than the campaign-driven political actions that are pervasive in western countries.

significantly increases its bank credit supply in the last two years of a five-year-plan cycle if its GDP growth in the first three years falls behind the target set in the five-year plan. This evidence reinforces our argument that local officials rely heavily on credit supply to stimulate the regional GDP in order to achieve better scores in the performance evaluation system. Finally, our results remain qualitatively unaltered when we employ the change model to better identify the causal relationship between political pressure and the banks' lending behaviour.

This paper contributes to the extant literature in several ways. First, our findings add evidence to the literature on the political influences on bank lending (La Porta et al., 2002; Brown and Dinc, 2005; Dinc, 2005). To our best knowledge, our paper is the first to provide direct evidence of the role played by political pressure in determining the banks' lending behaviour in China. Second, our paper contributes to the growing empirical literature on the political incentives of government officials, both in the context of China and in general (Besley and Case, 1992; Maskin et al., 2000; Chen et al., 2005; Li and Zhou, 2005). In particular, our paper is closely related to Li and Zhou (2005), who find that the likelihood of promotion for provincial leaders is positively associated with the regional economic performance. We, however, focus on the political pressure on provincial leaders and its link with bank lending decisions. Finally, our paper contributes to the debate on the role of government in transitional economies. Frye and Shleifer (1996) put forward the "helping hand" and the "grabbing hand" approaches. The former portrays the idea that the government seeks to guide and stimulate economic growth by reallocating financial resources, while the latter argues that government officials do not aim to maximize social welfare but pursue their own selfish objectives. Our study provides evidence consistent with the latter argument.

The remainder of the paper is structured as follows. Section 2 provides institutional background. Section 3 develops our research hypotheses. Section 4 explains the research design, including the measurement of variables, model specification, sample selection and data sources. Section 5 reports the empirical results and their interpretations. Section 6 concludes.

2. Institutional background

2.1 China's economy and economic plans

The growing interest among academics, investors and regulators around the world in the Chinese-style capitalism stems from China's increasing economic importance in the world. China has been growing at around 10% per year over the last three decades, and in 2010 China surpassed Japan as the world's second largest economy according to nominal GDP and purchasing power parity (PPP). Moreover, the *International Monetary Fund* (IMF) estimates China's GDP (in terms of PPP) at \$17.6tn against the US's \$17.4tn in 2014, indicating that China has officially overtaken the US as the biggest economy in the world.⁶

China's success is partly attributed to the model of state capitalism, in which planning plays a vital role in the economic development. Every five years, starting from 1953, the Chinese central government has formulated a national five-year plan containing detailed economic development guidelines for all industries and provinces.⁷ China's first five-year plan covered the period of 1953-1957, with a focus on "developing heavy industries". Since then, China has implemented eleven five-year plans, with the twelfth five-year *guideline* started in 2011.⁸

The formulation of the five-year plan is a top-down process. In response to the national five-year plan set by the central government, each province also stipulates a provincial-level five-year plan with adjustments as appropriate. Additionally, local governments have to present official annual reports, review current year's achievements and challenges, and set up targets (not restricted to economics targets) for the coming year.

The most relevant and important figure in the official documents is the target of

⁶ Details can be found in the article in The Financial Times titled "China's leap forward: overtaking the US as world's biggest economy" (October 08, 2014).

⁷ The idea of five-year plans originated from the former Soviet Union, whose philosophy was that the socialist economy should progress based on plans. Countries (including non-socialist countries) that have used or still use five-year plans include China, Cuba, Hungary, Mongolia, Romania, Vietnam, Argentina, Bhutan, Ethiopia, India, Nepal, Pakistan, South Korea and Malaysia (Chen et al., 2013).

⁸ The name of the eleventh five-year programme was changed from "plan" to "guideline". This was done to reflect China's transition from a centrally planned economy to a socialist market economy, as well as the more democratic and transparent formulation process.

GDP growth rate. Economic performance is a key indicator used in the personnel evaluation system in China (Chen et al., 2005; Li and Zhou, 2005). This has created growing criticism in recent years because the local governments tend to be eager for instant success and thus invest in projects that may not maximize long-term benefits. Motivated by career concerns, local officials may even engage in statistical falsification. As a result, some scholars have called for the GDP growth target to be abolished in the official documents.⁹

2.2 The political system in China

China is highly politically centralized and has five hierarchical levels of government: central, provincial, prefecture, county, and township.¹⁰ The Politburo of the Central Committee of the Communist Party of China (CCCPC) acts as the supreme decision-making organization of this “multidivisional” system (Chen et al., 2013), which ultimately controls the mobility of government officials within the system (Huang, 2002; Li and Zhou, 2005).

Provinces are the second level of China’s political system. As of 2014, there were 31 provincial units in China,¹¹ including four centrally administrated cities (Beijing, Shanghai, Tianjin and Chongqing), 22 provinces and five autonomous regions (Tibet, Xinjiang, Inner Mongolia, Ningxia, and Guangxi). The provincial party secretary is the top leader at the provincial level, followed by the provincial governor. This reflects the dual presence of the communist party and the government organs in China’s political system (Li and Zhou, 2005).

China began the major reforms of its economy in 1978. These reforms, especially the introduction of a “fiscal contracting system”,¹² have empowered provincial leaders with the ultimate authority over allocating economic resources in their jurisdictions. This, on the one hand, has significantly increased the strategic importance of the

⁹ Details of this story can be found at <http://www.ftchinese.com/story/001049291/?print=y> (in Chinese).

¹⁰ Following previous research (e.g., Jin et al., 2005) and because of data availability, the present paper focuses on the central-provincial relations.

¹¹ This excludes Taiwan, Hong Kong and Macau.

¹² See Jin et al. (2005) for further descriptions of China’s fiscal contracting system.

provincial leaders in local economic development (Qian and Xu, 1993). On the other hand, the provincial leaders have become more liable for the corresponding results arising from their decisions.

In addition, China's economic reforms also triggered the reform of its personnel control system. This has shifted the focus of personnel evaluation criteria away from political loyalty, which was the only important criterion for promotion prior to the reform, to economic performance (Chen et al., 2005). Although personal characteristics of a politician, including age, education and expertise in administrative management, also matter, local economic performance is the most important criterion on which central officials assess local officials. Within the multidivisional-form (M-form) structure of China's economic system, each provincial leader's performance is individually distinguishable and comparable (Qian and Xu, 1993; Maskin et al., 2000), which enables the use of a relative performance evaluation system by the central government. Consequently, local officials have become obsessed with their economic ranking among their peers. Every year, the government reports or provincial yearbooks provide detailed information on the relative performance rankings of each province, in areas ranging from GDP growth to infrastructure construction (Li and Zhou, 2005).

Unlike western countries, where political turnover is determined by the general public through democratic elections, China's centralized political hierarchy makes the political turnover more predictable. For example, a well-performing provincial leader is more likely to move up the ladder to the central government level, including Ministries and Commissions, the State Council, the Politburo or even the Politburo Standing Committee. As well as promotion, a punishment mechanism, including forced retirement and demotions,¹³ is also employed as an incentive. Given the few options outside the internal political labour market, Chinese government officials' concerns over their career prospects for promotion or termination are effective motivating them to fulfil the policy targets assigned by the central government and to compete against each other within the political system.

¹³ For brevity, we group them together and refer to both as terminations.

2.3 China's banking sector

China has a bank-based financial system, with the banking sector accounting for two-thirds of the economy's capital, more than double the share in the US and 1.5 times the share in most other economies (Farrell et al., 2006). China's banking sector is characterized by the dominance of the state ownership of banks, which allows for government intervention in the decision making of those banks (Firth et al., 2009). Prior to the late 1990s, the primary role of China's banking sector was to channel low-cost capital to state-owned enterprises (SOEs), even poorly performing ones, because of their scale and government ownership. Moreover, the banks, especially the local bank branches, were subject to great pressure from local officials to grant loans to politically favoured enterprises. As a result, policy lending was a salient characteristic of the banking system.

As a consequence of the policy-directed lending, the Chinese banks had accumulated enormous amounts of non-performing loans (NPLs). According to the statistics, the state banks' share of NPLs over total loans was 20% in 1994. This ratio increased to 25% in 1997 and then to 35% in 2000 (Tung, 2002; Firth et al., 2009). To address this problem, the government was forced to undertake a series of actions. First, China became a member of the World Trade Organization (WTO) on December 11, 2001. As a milestone move to honour its WTO commitments, China released the *Rules for Implementing the Regulations Governing Foreign Financial Institutions in the People's Republic of China* in January 2002. By December 2006, China had fully opened up its banking sector to foreign firms so that they could gradually expand their business in China over the next five years. Second, four asset management companies (Cinda, Oriental, Great Wall and Huarong) were established to assist the Big Four banks in addressing their loan problems. As a result of these efforts, the NPL ratios of the Big Four banks declined sharply from 2002 to 2009 (Barth et al., 2013). Third, the government encouraged banks to be listed on stock exchanges to enhance external monitoring. The public listing of the Big Four state-owned banks was successfully completed by the end of 2010. For instance, ICBC made the initial public offers (IPOs)

on both Shanghai and Hong Kong stock exchanges in October 2006 and raised a staggering \$21.9 billion (Berger et al., 2009). The record was broken by the IPO from the Agricultural Bank of China in 2010, which raised \$22.1 billion in Hong Kong.¹⁴ Finally, the government deregulated the banking sector by allowing several joint-stock commercial banks, city banks, and rural and urban credit cooperatives to operate in China. Moreover, foreign banks were also allowed to establish branches in China, and to make strategic minority investments in many of the state-owned commercial banks. Figure 1 summarizes the structure of China's commercial banking industry.

3. Literature review and hypotheses

Previous research consistently suggests that government ownership of banks is associated with lower subsequent bank performance and economic growth (e.g., Caprio and Peria, 2000; Beck and Levine, 2002; La Porta et al., 2002; Bonin et al., 2005; Berger et al., 2009; Lin and Zhang, 2009). This is broadly consistent with the “political view” that government-owned banks are used by politicians to serve their own political goals. This phenomenon is presumably more pronounced in countries with underdeveloped financial systems and poorly protected property rights, such as China (La Porta et al., 2002). For example, Berger et al. (2009) find that the Big Four banks in China are the least efficient of all banks, but that minority foreign ownership of the Big Four banks can improve bank efficiency. This is corroborated by Lin and Zhang (2009), who document that the Big Four banks are less profitable and less efficient than other types of banks in China. Chang et al. (2010) examine the effects of bank fund reallocation on regional economic growth in China from 1991 to 2005. They fail to find any correlation between either bank fund reallocation or bank loans and regional economic growth, which suggests that the lending decisions of Chinese banks are largely policy-driven rather than market-oriented.

Relative to the effects of government ownership of banks, the question of how bank lending is politically motivated has been much less studied. Sapienza (2004) finds

¹⁴ The world's biggest IPO, to date, is the US-listed offering made by The Alibaba Group in 2014.

that the interest rates charged by government-owned banks in Italy are associated with the local power of the party that controls the bank. Dinc (2005) shows that government-owned banks tend to increase their lending in election years relative to private banks. Khwaja and Mian (2005) find that politically connected firms in Pakistan borrow more from state-owned banks and are more likely to default. However, the empirical evidence from China is very limited, with the exception of Ho et al. (2013), who find an increase in lending made by Chinese state-owned banks during the recent financial crisis when they were mandated by the government to extend credit. The interpretation is that China's state-owned banking system, as a policy instrument, is subsumed into the government's macroeconomic agenda.

Based on our discussion of the institutional background and the extant literature, the coexistence of political centralization and fiscal decentralization in China allows for a yardstick competition to take place among local officials. On the one hand, the personnel control is centralized in the hands of central government and economic performance is a crucial indicator used in personnel evaluations. On the other hand, the local governments have substantial influences over the local financial resources, including bank credit. As a result, in order to build up the economy and thus relieve the personal political pressure, provincial leaders are likely to increase bank lending by exerting influence over the banks in their jurisdictions. Moreover, the political influence is expected to be greater for Big Four state-owned banks, which are much more politically pressurized and undertake more non-economic obligations than other banks. Previous literature also suggests that politically motivated lending mainly exists in state-owned banks (La Porta et al., 2002; Dinc, 2005). Thus, we formulate the following hypotheses:

H1: *There is a positive association between the political pressure on provincial leaders and the growth of bank loans.*

H2: *The predicted positive relation from H1 is more pronounced for the Big Four banks than for others.*

The institutional environment in China varies across regions because different regions are moving towards a market-oriented economy at different paces (Chen et al., 2006; Lai et al., 2013). Prior literature documents that regional marketization plays an essential role in affecting the financial practices of Chinese firms, including capital structure (Li et al., 2009; Li et al., 2011), corporate fraud (Chen et al., 2006), dividend payouts (Chen et al., 2009), investment comovement (Chen et al., 2013), foreign direct investment (Du et al., 2008) and so forth. In a related study, Firth et al. (2009) find that political connections are less important and financial performance are more important in determining credit allocation in regions with more developed banking sectors. Applying this logic to our setting, we hypothesize that the level of regional banking liberalization moderates the political influence on bank lending:

***H3:** The positive association between political pressure and the growth of bank loans is weaker in regions with more developed banking sectors.*

As a result of political interference in the credit market, the lending decisions of banks may not be made on a commercial basis but instead out of political considerations. Under the system of relative performance evaluation, local politicians are only interested in the achievements reaped from apparent short-term success, even at the expense of the long-term prosperity. According to our description in earlier sections, local officials are promoted almost entirely based on their locality's growth rates, giving them a huge incentive to meet or even beat the GDP growth targets. Once local officials are promoted to a higher rank, the losses or bad debts of banks incurred during their premiership will become the liabilities of their successors. As such, we predict a negative association between political pressure and bank lending efficiency as follows:

***H4:** Bank lending is less commercially oriented under greater political pressure.*

***H5:** There is a negative association between political pressure and loan quality.*

4. Research design and data

4.1 Measurement of main variables

4.1.1 Bank credit growth

Following the vast prior literature, we measure the main dependent variable, growth of bank loans ($\Delta Loan_{i,t}$), as the percentage change in province i 's total bank loans from year $t-1$ to year t . To disentangle the effect of political pressure on banks with different ownership, we measure the loan growth as the annual growth rate of bank lending from the Big Four banks, other domestic banks and foreign banks, respectively, when testing hypothesis H2.

4.1.2 Political pressure

China's local officials come under pressure regarding the regional GDP growth rate because it is directly related to their prospects of promotion or termination (Wu, 2000; Rawski, 2001; Li and Zhou, 2005). Following the economic growth target set in the national five-year plan, local governments set their own targets in the regional five-year plan. We employ two measures to capture the political pressure: $GAP_{5YRi,t}$ is the difference between the target GDP growth rate committed in province i 's five-year plan and its actual GDP growth rate in year t ; and $GAP_{NBi,t}$ is the difference between the average GDP growth rate of province i 's adjacent neighbours and its actual growth rate in year t .¹⁵ Both measures are scaled by the actual GDP growth rate of province i in year t . Higher values of the measures indicate greater political pressure on the local officials.

4.1.3 Banking market development

¹⁵ According to the classification of the National Bureau of Statistics of China (NBSC), China can be classified into four regions in terms of their level of economic development. The eastern region includes the following 10 provinces and municipalities: Beijing, Tianjin, Hebei, Fujian, Guangdong, Hainan, Jiangsu, Shandong, Shanghai and Zhejiang. The central region includes the following 6 provinces: Anhui, Henan, Hubei, Hunan, Jiangxi and Shanxi. The western region includes the following 12 provinces and municipalities: Chongqing, Gansu, Guangxi, Guizhou, Inner Mongolia, Ningxia, Qinghai, Shaanxi, Sichuan, Tibet, Xinjiang, and Yunnan. The northeastern region includes Liaoning, Heilongjiang and Jilin. For instance, Beijing's GAP_{NBt} is computed as the mean of the actual GDP growth rates of the 9 eastern regions other than Beijing minus the actual GDP growth rate of Beijing in year t .

China's private firms are discriminated against by the state-dominated financial markets, which impede the progress of marketization (Brandt and Li, 2003). Following Bushman et al. (2013), we measure the degree of banking market development as the percentage of bank loans issued to non-state-owned enterprises. A higher value of the percentage suggests that, on average, bank decisions about credit allocation are largely motivated by profit maximization and less by political considerations. We obtain the measures from the National Economic Research Institute (NERI) Index of the Marketization of China's provinces, constructed by Fan et al. (2011).¹⁶

Table A.1 presents the marketization index by province and year. Individually, Zhejiang has the highest average value, followed by Guangdong and Jiangsu. The province with the least developed banking market is Jilin, followed by Heilongjiang and Gansu. Beyond this, the eastern regions have higher values than the other regions in general, which is consistent with the uneven economic growth in China's regions.

4.2 Model specification

4.2.1 Test of H1 and H2

To test hypothesis H1, concerning the influence of political pressure on bank loan growth, we estimate the following model:

$$\Delta Loan_{i,t} = \alpha_0 + \beta_1 Pressure_{i,t} + \sum Controls_{i,t} + \varepsilon_{i,t} \quad (1)$$

where, for province i and year t , $\Delta Loan$ is the annual growth rate of bank loans. $Pressure$ is the political pressure, separately measured by GAP_{5YR} or GAP_{NB} as defined in Section 4.1.2. If hypothesis H1 is true, then β_1 should be significantly positive.

Following previous research (e.g., Firth et al., 2009; Berger et al., 2009), we include a vector of control variables to capture possible confounding effects, as follows: $\Delta GDP_{i,t}$ is measured as the percentage change of province i 's GDP from year $t-1$ to year t . $\Delta Deposit_{i,t}$ is measured as the percentage change of province i 's deposits from year $t-1$ to year t . $Branch_{i,t}$ is the logarithm of the number of bank branches in province i and year t . $SOE_{i,t}$ is measured by the ratio of revenues from state-owned enterprises to those

¹⁶ Since the data are only available up to 2009, we use the 2009 index to measure the level of banking market development for 2010 and 2011.

from all enterprises in province i and year t . $Fiscal_{i,t}$ measures the degree of fiscal decentralization, computed as the ratio of province i 's spending to central spending, expressed in per capita terms, and multiplied by $(1 - \text{province } i\text{'s GDP/national GDP})$, following Zhang and Zou (1998). $Openness_{i,t}$ measures economic openness, calculated as the sum of exports and imports divided by GDP in province i and year t . $Industry_{i,t}$ is the total value of secondary industry divided by GDP in province i and year t .

In addition to these macroeconomic factors, we also control for a set of characteristics of the provincial leaders.¹⁷ *Age* is measured as the logarithm of the age of the provincial committee secretary. *Age60* is a dummy variable that equals one if the leader is 60 or older, and zero otherwise. Age is a critical variable determining political turnover (Li and Zhou, 2005). Officials who are 60 or older will be forced to retire within five years under the 65-years-of-age retirement rule, making them less politically motivated to promote economic growth (Xu and Wang, 2010). *Tenure* is the number of years for which the provincial leader has been in the post. *Promotion* is a dummy variable that equals one if the provincial leader was promoted from within the provincial government. *Education* measures the level of education, set to 3, 2, 1, or 0 for PhD, Master's, Bachelor's or lower, respectively. *Experience* measures expertise in economics and management. It is a dummy variable taking the value of 1 if the provincial leader previously held a post in the provincial or a higher level of government in which he/she was directly involved in formulating and implementing economic plans.¹⁸ The variable definitions are presented in Table A.2.

To take a closer look at whether the political influence in bank loans varies among banks of different ownership, as posited in hypothesis H2, we re-examine Eq.(1) and disaggregate the total loans into loans issued by the Big Four banks, other domestic banks and foreign banks, respectively. If our hypothesis H2 holds, then β_1 should be more significant when the Big Four banks act as the lenders.

¹⁷ In the present study, we focus on provincial committee secretaries, because they are considered the most powerful officials in each province (Li and Zhou, 2005).

¹⁸ These posts mainly include those at the National Development and Reform Commission, the Economic and Trade Commission, the People's Bank of China, the China Securities Regulatory Commission, the CBRC and the China Insurance Regulatory Commission.

4.2.2 Test of H3

To test hypothesis H3 that the effect of political pressure on bank lending is attenuated in regions with a higher degree of banking marketization, we estimate the equation as follows:

$$\Delta Loan_{i,t} = \alpha_0 + \beta_1 Pressure_{i,t} + \beta_2 NERI_{i,t} + \beta_3 Pressure_{i,t} \times NERI_{i,t} + \sum Controls_{i,t} + \varepsilon_{i,t} \quad (2)$$

where the degree of regional marketization is measured using the financial marketization index that is developed by the National Economic Research Institute of China. Each year provinces are grouped into three terciles. *NERI* equals three if the province-year is ranked as the highest tercile, two for the intermediate, and one for the lowest. Thus, we expect the coefficient on *Pressure* \times *NERI* (β_3) is significantly negative.

4.2.3 Test of H4

To test the influence of political pressure on lending efficiency, we follow Podpiera (2006) and estimate the following equation:

$$\Delta Loan_{i,t} = \alpha_0 + \beta_1 Pressure_{i,t} + \beta_2 Surplus_{i,t} + \beta_3 Pressure_{i,t} \times Surplus_{i,t} + \sum Controls_{i,t} + \varepsilon_{i,t} \quad (3)$$

where *Surplus* is a proxy for the profitability of all enterprises in province *i*, computed as the ratio of operating surplus to GDP in province *i*.¹⁹ A positive relation between *Surplus* and $\Delta Loan$ can be interpreted as an indication of growing commercial orientation. Applying this logic, if political pressure reduces bank lending efficiency, then we should observe that the coefficient on *Pressure* \times *Surplus* (β_3) is significantly negative.

4.2.4. Test of H5

¹⁹ Podpiera (2006) argues that while the operating surplus data may reflect profitability of state-owned enterprises more closely than that of other enterprises. It can be used as a proxy for financial performance of all enterprises since there is no reliable and comprehensive data on the performance of all enterprises by regions.

Finally, to test hypothesis H5 concerning the impact of political pressure on loan quality, we follow Schaeck et al. (2009) and estimated the following equation:²⁰

$$NLoan_{i,t+1 \text{ to } t+3} = \alpha_0 + \beta_1 Pressure_{i,t} + \beta_2 \Delta GDP_{i,t+1 \text{ to } t+3} + \beta_3 Fiscal_{i,t+1 \text{ to } t+3} + \beta_4 Industry_{i,t+1 \text{ to } t+3} + \beta_5 M_structure_{i,t+1 \text{ to } t+3} + \varepsilon_{i,t} \quad (4)$$

where *NLoan* is measured as the percentage of non-performing loans to total loans. *M_structure* is a proxy for market structure, measured as the proportion of total assets held by the four largest banks in China. The other variables share the same definitions as those in Section 4.2.1. The independent variable, *Pressure*, is lagged at least one period with respect to the dependent variable, *NLoan*, to allow for the fact that it takes time for political pressure to have its full impact on the loan quality. Since the data on loan quality is only available from 2009 to 2013, our sample is reduced to a smaller size. If hypothesis H5 holds, then β_1 should be significantly positive.

4.3 Sample and data

Our sample covers 2002-2011, a ten-year period. Most of the data used in this study have been manually collected from various sources. For example, the data of bank lending come from the official website of the CBRC and the Almanac of China's Finance and Banking. The GDP growth targets come from regional five-year plans and annual government reports. The characteristics of the provincial leaders come mainly from People's Daily Online and Xinhua Net, among others. Macroeconomic data, including GDP growth and operating surplus, is drawn from the China Statistical Yearbooks. All continuous variables are winsorized at the 1st and 99th percentiles to mitigate the effect of outliers.

Table 1 presents the sample selection process. The initial sample consists of 310 province-year observations. Tibet province is excluded from our sample due to data unavailability. We also delete observations without GDP growth goals. The sample selection process yields a final sample of 294 observations (province-year).

[Insert Table 1]

²⁰ Our control variables are less than those in Schaeck et al (2009) because of different research setting.

5. Empirical results

5.1 Summary statistics and correlations

Table 2 presents summary statistics for the variables used in the main analyses. The average and median levels of credit growth are 14.1% and 14%, respectively, suggesting that bank lending is ubiquitous in China. Political pressure, measured by GAP_{5YR} is negative in terms of mean and median, which reveals that local officials may set low targets to lessen the pressure. Nevertheless, GAP_{NB} is positive on average, which suggests that political pressure becomes greater when a relative performance evaluation system is introduced. SOEs contribute more than 40% of local economy, consistent with China's economy being characterized by state-capitalism. International business and secondary industry constitute a large proportion of China's economy, consistent with China's status as an export-oriented country and world manufacturing centre. The average age of the provincial leaders is about 59 years, varying from 36 to 69 years. More than half of the leaders are older than 60 years. On average, provincial leaders hold the office for three and a half years and 42.3% of them were promoted from within the provincial government. The leaders have a Bachelor's degree or higher on average, and 42% of them have previous work experience in economics departments.

Table 3 presents the Pearson correlation matrix. Credit growth is significantly positively correlated with political pressure (correlation coefficients: 0.265 for GAP_{5YR} , and 0.101 for GAP_{NB}). This lends initial support to hypothesis H1 that local officials are likely to cope with political pressure by expanding bank credit. As expected, the two pressure variables are highly correlated with each other. In addition, credit growth is positively correlated with deposit growth (*Deposit*: 0.670), the number of bank branches (*Branch*: 0.125), local fiscal power (*Deficit*: 0.102) and the educational background of the provincial leader (*Education*: 0.108), and negatively correlated with the percentage contributed by the state-owned economy (*SOE*: -0.251). Finally, the correlations among the non-dependent variables are less than 0.7 in general. Thus,

multicollinearity should not be a concern in this study.²¹

[Insert Table 3]

5.2 Political pressure and credit growth: Test of H1

Table 4 reports the regression results of testing hypothesis H1. In the first two columns, we report the regressions with GAP_{5YR} as the independent variable. Regardless of whether the characteristics of provincial leaders are included, the coefficients on GAP_{5YR} are statistically positive (in column 2: coefficient=0.072, t -stat=2.114). This supports our conjecture that regional banks are forced to expand credit when local officials face the pressure of not being able to achieve the economic goals. Similar results are observed in columns (3) and (4) (in column 4: coefficient=0.076, t -stat=1.869), where GAP_{NB} is used as the independent variable. This implies that local officials have greater pressure and are more likely to push local banks to issue credit when they are outperformed by the adjacent provincial leaders.

[Insert Table 4]

The signs of the coefficients on control variables are broadly consistent with the predicted ones. For instance, the coefficients on ΔGDP are positive and significant at the 1% level, suggesting that the growth rate of loans is primarily driven by regional economic growth. In addition, the coefficients on $\Delta Deposit$ are positive and significant, which is consistent with Jayaratne and Morgan's (2000) finding that faster deposit growth signals a growing demand for loans. *Branch* has positive coefficients although statistically insignificant, suggesting that the competitiveness of the banking sector increases with the allocation of credit made by the banks. The coefficients on *Openness* are positive and significant, indicating that loans are in higher demand in wealthier and export-oriented regions. Finally, *Age60* is negatively associated with credit growth, consistent with Li and Zhou's (2005) finding that officials who are older than 60 are less likely to be promoted and therefore have less motivation to build up the economy

²¹ Lind et al. (2002) point out that multicollinearity may exist if the correlation coefficients exceed 0.7, which is a typical threshold used to identify its presence.

through bank credit.

5.3 Subsample analysis: Test of H2

Table 5 presents results of examining hypothesis H2. Columns (1) and (2) report results when loans are issued by the Big Four state-owned banks. Consistent with our prediction, both measures of political pressure are significantly positive. However, as shown in the rest of columns, the relation becomes insignificant for other domestic banks and foreign banks, whose lending decisions are less likely to be made on a political basis. Overall, the results suggest that the primary role of state-owned banks is to serve policy goals rather than seek profit, which partially explains why state-owned banks underperform their foreign counterparts in China (Berger et al., 2009).

[Insert Table 5]

5.4 Banking marketization, political pressure and credit growth: Test of H3

According to hypothesis H3, the relationship between political pressure and credit growth may not be uniform between regions with more and less developed banking sectors. Our results from testing this hypothesis are reported in Table 6. Consistent with Firth et al. (2009), banking marketization changes the effect of political pressure on credit growth. Specifically, the coefficients on $Pressure \times NERI$ are significantly negative for both measures of political pressure, indicating that the institutional environment, especially the banking liberalization, is an important mechanism that moderates political interference in bank decisions.

[Insert Table 6]

5.5 Political pressure and lending efficiency: Test of H4

Table 7 presents the regression results of testing hypothesis H4. The coefficients on *Surplus* are positive and significant at the 5% level, suggesting that on average the profitability of regional enterprises is an important determinant of lending growth. However, this positive relation is moderated by political pressure. Specifically, the coefficients on $Pressure \times Surplus$ are significantly negative. This confirms our

hypothesis H4 that banks do not appear to take corporate profitability into account when local governments are subject to great political pressure.

[Insert Table 7]

5.6 Political pressure and loan quality: Test of H5

Table 8 shows the relation between political pressure and the quality of loans. As conjectured, the current pressure is significantly positively associated with non-performing loans in the subsequent three years. When political pressure arises from the inter-party competition, i.e., GAP_{NB} is the dependent variable, the impact of pressure on loan quality gradually decreases across periods, with the effect being the strongest for the $t+1$ year. In addition, the proportion of secondary industry to local economy is another determinant of bad debts, which supports the statistics of the CBRC showing that the secondary industry contributes to the largest share of non-performing loans in China.²²

[Insert Table 8]

5.7 Robustness analyses

5.7.1 Political pressure and excessive loan growth

As a robustness check, we repeat our analyses using excessive loan growth as the dependent variable. A widely used approach explains the expected level of credit growth by a set of macroeconomic variables (Hofmann, 2001; Brzoza-Brzezina, 2005). However, this approach may not be applicable in China. Because bank credit serves mainly as a policy tool in China, and it is less reliant on market factors than it is in developed economies (Koivu, 2009). In addition, this type of estimation requires data over a long period, which is unavailable in China. Excessive credit growth is also defined as credit expansion beyond the growth of the real economy (Honohan, 1997; Adams et al., 1998). Following this definition, we measure the excessive credit growth ($Ex\Delta Loan_{i,t}$) in the present study as the growth rate of bank loans minus the GDP growth

²² Please find detailed information via the following link:
<http://www.cbrc.gov.cn/chinese/home/docView/4DE6AD136C6E4F99B9883B7672674FC3.html>

rate for province i in year t . As can be seen in Table 9, results are similar to those reported in previous tables. These results reinforce our evidence of the political influence on the bank lending behaviour.

[Insert Table 9]

5.7.2 Mid-term political pressure and loan growth

One may argue that, if loan growth is indeed driven by political pressure, we should observe more aggressive credit growth in the later years of a five-year cycle if the local government has failed to achieve its economic goals in the earlier years. To investigate this issue, we re-examine Eq.(1) replacing the independent variable with $LagGAP_{5YR}$, which equals 1 if the average value of GDP growth for the first three years is below the target growth rate committed in the five-year plan, and 0 otherwise. Table 10 presents the results. As shown in both columns (1) and (2), the coefficients on $LagGAP_{5YR}$ are positive and significant at the 10% level. This corroborates our argument that local governments that have underperformed relative to their economy target in the earlier years during a five-year plan may attempt to catch up in the later years by expanding bank credit.

[Insert Table 10]

5.7.3 Political pressure and loan growth: Change specifications

It is argued in prior literature (Li, 2010a; Kravet and Muslu, 2013) that change methodology can better prevent statistical inferences from correlated omitted variables and reverse causality problems. In an attempt to address the potential concerns, we repeat all analysis by employing change specifications, in which all variables except for dummy are measured by the annual change from year $t-1$ to year t . As shown in Table 11, our main inferences are not quantitatively affected by the change methodology.²³

[Insert Table 11]

²³ The full results are presented in Appendix Tables A.3, A.4, and A.5 so as to save space.

6. Conclusion

In this paper, we examine the association between credit growth and political pressure in the context of China. Using a unique dataset of Chinese banks for the period 2002-2011, we obtain the following findings: First, political pressure is positively associated with credit growth, and the relation is more pronounced for loans issued by the Big Four state-owned banks. Our findings support the “political” view that government officials may participate in bank decisions making because of their political objectives. Next, the relation is attenuated in regions with more developed banking sectors, suggesting that the institutional environment is an external monitoring and governance mechanism for banks. Finally, as a result of growing political intervention, lending decisions of banks becomes less commercially oriented and loan quality is going down. Overall, our findings suggest that the political motives significantly affect the amount of credit issued by banks in China.

Our findings have implications for regulators, banks and investors. For policy makers in transitional economies, given the pervasiveness of political influence in the financial markets, further rules and regulations should be promulgated to make banks’ lending decisions more commercially oriented and to create a more impartial playing field for all types of banks. In addition, banks can utilize the results if they want to improve efficiency. Particularly, state-owned banks are likely to benefit from ongoing partial privatization by introducing foreign strategic investors. Finally, investors can benefit from our study through increased awareness of the association between political pressure and bank lending decisions.

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Table 1: Sample selection

This table reports the sample selection criteria. For the 300 province-year observations, we have manually collected the following data: bank loans (from China Banking Regulatory Commission), targets of GDP growth (from regional five-year plans and government annual reports), characteristics of provincial leaders (from People's Daily Online and Xinhua Net), and some macroeconomic estimates (from China Statistical Yearbooks).

Sample selection process	Observations
Initial sample of 31 provinces for 2002 to 2011	310
Less:	
Observations of Tibet province	10
Province-year without targets of GDP growth from the government five-year plans	6
Final sample	294

Table 2: Summary statistics

This table shows summary statistics of the main variables. Variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and the 99th percentiles.

Variable	Obs.	Mean	Median	Std. Dev.	Min	Max
<i>ΔLoan</i>	300	0.141	0.140	0.085	-0.310	0.350
<i>NPLoan</i>	150	0.012	0.010	0.005	0.004	0.029
<i>GAP_{5YR}</i>	294	-0.225	-0.224	0.121	-0.621	0.111
<i>GAP_{NB}</i>	300	0.020	0.004	0.150	-0.459	0.544
<i>ΔGDP</i>	300	0.127	0.126	0.022	0.054	0.238
<i>ΔDeposit</i>	300	0.158	0.150	0.052	-0.120	0.320
<i>Branch</i>	300	7.948	8.009	0.698	6.100	9.385
<i>SOE</i>	300	0.416	0.422	0.119	0.184	0.731
<i>Fiscal</i>	300	0.560	0.543	0.104	0.351	0.879
<i>Openness</i>	300	0.356	0.148	0.446	0.029	3.609
<i>Industry</i>	300	0.476	0.487	7.549	0.207	0.615
<i>Surplus</i>	300	0.246	0.252	0.064	0.075	0.383
<i>Age</i>	300	58.720	60.000	5.222	36.000	69.000
<i>Age60</i>	300	0.506	1.000	0.500	0.000	1.000
<i>Tenure</i>	300	3.545	3.000	2.486	0.083	14.000
<i>Promotion</i>	300	0.423	0.000	0.494	0.000	1.000
<i>Education</i>	300	1.553	1.000	0.780	0.000	3.000
<i>Experience</i>	300	0.420	0.000	0.494	0.000	1.000

Table 3: Correlation matrix

This table reports the correlation matrix of variables used in the main analyses. Variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * indicate significant difference at the 1%, 5%, and 10% levels, respectively (two-sided).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>ΔLoan</i>																
<i>GAP_{5YR}</i>	0.265***															
<i>GAP_{NB}</i>	0.101*	0.625***														
<i>ΔGDP</i>	0.088	-0.663***	-0.553***													
<i>ΔDeposit</i>	0.670***	0.004	-0.144**	0.072												
<i>Branch</i>	0.125**	-0.084	-0.103*	0.073	0.076											
<i>SOE</i>	-0.251***	0.174***	0.241***	-0.230***	-0.237***	-0.536***										
<i>Fiscal</i>	0.102*	-0.121**	-0.046	0.140**	0.054	0.469***	-0.639***									
<i>Openness</i>	0.011	-0.083	-0.024	0.012	-0.012	0.225***	-0.398***	0.705***								
<i>Surplus</i>	-0.099*	-0.240***	-0.209***	0.450***	-0.077	0.352***	-0.391***	0.165**	0.287***							
<i>Industry</i>	0.024	-0.073	-0.260***	0.299***	0.094	0.334***	-0.240***	0.061	0.113**	0.429***						
<i>Age</i>	0.071	-0.007	-0.063	0.043	0.084	0.115**	-0.165***	0.186***	0.084	0.068	-0.129**					
<i>Age60</i>	-0.013	-0.008	-0.039	0.051	0.015	0.068	-0.057	0.116**	0.043	0.101*	-0.124**	0.722***				
<i>Tenure</i>	-0.055	0.072	0.139**	-0.079	-0.028	-0.116**	0.221***	-0.049	0.011	-0.033	-0.155***	0.061	0.242***			
<i>Promotion</i>	-0.083	0.089	0.142**	-0.119**	-0.074	-0.050	0.034	0.120**	0.077	-0.030	-0.194***	-0.069	-0.004	0.123**		
<i>Education</i>	0.108**	0.023	0.031	0.039	0.080	0.021	-0.052	0.036	-0.042	-0.059	-0.034	-0.354***	-0.317***	-0.145***	0.127**	
<i>Experience</i>	0.059	-0.065	-0.059	0.080	0.097*	0.074	-0.119**	0.096*	0.034	0.029	0.021	-0.143**	-0.241***	-0.255***	-0.168***	0.331***

Table 4: Political pressure and credit growth

This table reports results of panel regressions that estimate the impact of political pressure (GAP_{5YR} , GAP_{NB}) on provincial credit growth. The dependent variable is annual growth rate of the total bank loans ($\Delta Loan$). Variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and 99th percentiles. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5%, and 10% levels, respectively (two-sided).

	Expected Signs	(1)	(2)	(3)	(4)
GAP_{5YR}	+	0.073* (1.929)	0.072** (2.114)		
GAP_{NB}	+			0.079** (2.248)	0.076* (1.869)
ΔGDP	+	0.614*** (3.356)	0.589*** (3.791)	0.889*** (3.089)	0.841*** (2.820)
$\Delta Deposit$	+	0.880*** (11.449)	0.883*** (11.359)	0.843*** (9.943)	0.848*** (10.194)
<i>Branch</i>	+	0.011 (1.457)	0.012* (1.781)	0.010 (1.370)	0.011 (1.657)
<i>SOE</i>	+	0.042 (0.988)	0.039 (0.914)	0.026 (0.676)	0.023 (0.557)
<i>Fiscal</i>	-	-0.040 (-1.106)	-0.036 (-1.056)	-0.035 (-0.849)	-0.030 (-0.772)
<i>Openness</i>	+	0.012* (1.907)	0.012* (1.929)	0.011 (1.570)	0.011 (1.556)
<i>Industry</i>	-	-0.000 (-0.816)	-0.000 (-0.798)	-0.000 (-0.594)	-0.000 (-0.634)
<i>Age</i>	?		0.001 (1.289)		0.001 (1.274)
<i>Age60</i>	-		-0.014* (-1.885)		-0.012 (-1.653)
<i>Tenure</i>	?		-0.000 (-0.169)		-0.000 (-0.415)
<i>Promotion</i>	-		-0.005 (-0.722)		-0.006 (-0.878)
<i>Education</i>	+		0.005 (1.281)		0.005 (1.294)
<i>Experience</i>	?		-0.007 (-1.116)		-0.007 (-1.080)
<i>Intercept</i>		-0.176 (-1.487)	-0.262** (-2.108)	-0.217** (-2.645)	-0.279*** (-3.280)
Year		Y	Y	Y	Y
Obs.		294	294	300	300
R-square		0.759	0.770	0.759	0.769

Table 5: Subsample analysis: Big Four banks, other domestic banks and foreign banks

This table reports results of panel regressions that estimate the impact of political pressure (GAP_{5YR} , GAP_{NB}) on provincial credit growth. In models (1) and (2), the dependent variable is the annual growth rate of total loans made by Big Four state-owned banks. In models (3) and (4), the dependent variable is the annual growth rate of total loans made by other domestic banks. Finally, in models (5) and (6), the annual growth rate of total loans made by foreign banks is used. Variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and 99th percentiles. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5%, and 10% levels, respectively (two-sided).

	Expected Signs	Big 4 state-owned banks		Other domestic banks		Foreign banks	
		(1)	(2)	(3)	(4)	(4)	(6)
GAP_{5YR}	+	0.061* (1.718)		0.019 (0.279)		0.008 (1.513)	
GAP_{NB}	+		0.075* (1.765)		-0.025 (-0.362)		-0.006 (-0.716)
ΔGDP	+	0.672*** (3.840)	0.990*** (3.357)	-0.238 (-0.461)	-0.444 (-0.617)	0.030 (1.078)	-0.060 (-0.849)
$\Delta Deposit$	+	0.728*** (7.801)	0.675*** (7.059)	1.115*** (6.788)	1.109*** (6.994)	0.003*** (6.226)	0.003*** (5.919)
<i>Branch</i>	+	-0.004 (-0.473)	-0.005 (-0.604)	-0.023 (-1.316)	-0.023 (-1.372)	-0.001 (-1.213)	-0.002* (-1.886)
<i>SOE</i>	+	0.009 (0.193)	-0.009 (-0.194)	-0.111 (-1.308)	-0.114 (-1.398)	-0.001 (-0.146)	0.002 (0.193)
<i>Fiscal</i>	-	-0.112** (-2.496)	-0.108** (-2.153)	-0.052 (-1.022)	-0.048 (-0.798)	-0.018** (-2.204)	-0.011 (-1.433)
<i>Openness</i>	+	0.023** (2.756)	0.023** (2.472)	-0.000 (-0.029)	0.000 (0.009)	-0.002* (-1.978)	-0.003* (-2.035)
<i>Industry</i>	-	0.000 (0.138)	0.000 (0.101)	0.002 (1.340)	0.002 (1.446)	-0.000** (-2.683)	-0.000 (-0.569)
<i>Age</i>	?	0.001 (1.483)	0.001 (1.382)	0.002 (1.316)	0.002 (1.266)	-0.000 (-1.209)	-0.000 (-0.758)
<i>Age60</i>	-	-0.010 (-1.182)	-0.008 (-0.910)	-0.013 (-0.828)	-0.013 (-0.804)	0.001 (0.611)	-0.000 (-0.040)
<i>Tenure</i>	?	-0.000 (-0.096)	-0.000 (-0.300)	0.004 (1.604)	0.004 (1.621)	-0.000 (-0.611)	-0.000 (-0.116)
<i>Promotion</i>	-	-0.006 (-0.750)	-0.007 (-1.000)	-0.013 (-1.020)	-0.013 (-1.038)	-0.001 (-1.191)	-0.000 (-0.390)
<i>Education</i>	+	0.008* (1.856)	0.008* (1.853)	0.016 (1.412)	0.015 (1.383)	-0.000 (-0.887)	0.000 (0.362)
<i>Experience</i>	?	-0.005 (-0.802)	-0.006 (-0.863)	-0.008 (-0.703)	-0.009 (-0.809)	-0.002 (-1.425)	-0.002* (-1.807)
<i>Intercept</i>		-0.121 (-0.805)	-0.146 (-1.251)	0.057 (0.331)	0.067 (0.398)	0.040*** (3.053)	0.051*** (2.903)
Year		Y	Y	Y	Y	Y	Y
Obs.		294	300	292	298	76	78
R-square		0.678	0.679	0.662	0.661	0.387	0.335

Table 6: Financial marketization, political pressure and credit growth

This table reports results of panel regressions that estimate the impact of political pressure (GAP_{5YR} , GAP_{NB}) and financial marketization ($NERI$) on provincial credit growth. The dependent variable is annual growth rate of the total bank loans ($\Delta Loan$). $NERI$ is estimated using the financial marketization index that is developed by the National Economic Research Institute (NERI) of China. Each year provinces are grouped into terciles (=3 for the highest, =1 for the lowest) based on their marketization level. Variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and 99th percentiles. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5%, and 10% levels, respectively (two-sided).

	Expected Signs	(1)	(2)	(3)	(4)
GAP_{5YR}	+	0.180** (2.299)	0.176** (2.464)		
$GAP_{5YR} \times NERI$	-	-0.048* (-1.727)	-0.046* (-1.759)		
GAP_{NB}	+			0.233*** (3.094)	0.244*** (3.291)
$GAP_{NB} \times NERI$	-			-0.061** (-2.539)	-0.065*** (-2.979)
$NERI$	+	0.037* (1.718)	0.036* (1.803)	0.063** (2.704)	0.068*** (3.148)
ΔGDP	+	0.612*** (3.112)	0.595*** (3.625)	0.962*** (3.008)	0.938*** (2.792)
$\Delta Deposit$	+	0.882*** (12.046)	0.885*** (11.841)	0.868*** (10.548)	0.873*** (10.616)
$Branch$	+	0.012 (1.610)	0.011 (1.650)	0.011 (1.641)	0.011 (1.608)
SOE	+	0.035 (0.795)	0.032 (0.718)	0.021 (0.516)	0.017 (0.396)
$Fiscal$	-	-0.043 (-1.174)	-0.044 (-1.256)	-0.039 (-0.964)	-0.039 (-0.977)
$Openness$	+	0.013** (2.098)	0.014** (2.120)	0.011* (1.743)	0.012* (1.727)
$Industry$	-	-0.000 (-0.879)	-0.000 (-0.893)	-0.000 (-0.657)	-0.000 (-0.703)
Age	?		0.001 (1.228)		0.001 (1.353)
$Age60$	-		-0.013* (-1.820)		-0.012* (-1.721)
$Tenure$?		-0.000 (-0.147)		-0.001 (-0.699)
$Promotion$	-		-0.006 (-0.945)		-0.006 (-1.056)
$Education$	+		0.005 (1.229)		0.006 (1.428)
$Experience$?		-0.006 (-1.054)		-0.005 (-0.838)
$Intercept$		-0.292** (-2.171)	-0.330** (-2.342)	-0.394*** (-3.507)	-0.467*** (-4.353)
Year		Y	Y	Y	Y
Obs.		294	294	300	300
R-square		0.761	0.761	0.764	0.766

Table 7: Political pressure and provincial profitability

This table reports results of panel regressions that estimate the impact of political pressure (GAP_{5YR} , GAP_{NB}) and provincial profitability (*Surplus*) on provincial credit growth. The dependent variable is annual growth rate of the total bank loans ($\Delta Loan$). *Surplus* measures the province's profitability, which is defined as the ratio of operating surplus to GDP. Variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and 99th percentiles. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5%, and 10% levels, respectively (two-sided).

	Expected Signs	(1)	(2)
<i>Surplus</i>	+	0.600** (2.152)	0.678** (2.480)
GAP_{5YR}	+	0.206** (2.457)	
$GAP_{5YR} \times Surplus$	-	-0.743** (-2.108)	
GAP_{NB}	+		0.207** (2.449)
$GAP_{NB} \times Surplus$	-		-0.659** (-2.295)
ΔGDP	+	0.321* (1.871)	0.529** (2.399)
$\Delta Deposit$	+	0.882*** (10.481)	0.859*** (9.688)
<i>SOE</i>	+	-0.020 (-0.672)	-0.036 (-1.120)
<i>Industry</i>	-	0.000 (0.460)	0.000 (0.562)
<i>Intercept</i>	?	-0.129 (-1.493)	-0.251*** (-2.822)
<i>Characteristics of provincial leaders</i>		Controlled	Controlled
Year		Y	Y
Obs.		294	300
R-square		0.751	0.752

Table 8: Political pressure and the quality of loans

This table reports results of panel regressions that estimate the impact of political pressure (GAP_{5YR} , GAP_{NB}) on the quality of bank loans ($NPLoan$). The dependent variable is $NPLoan$, which is defined as the amount of non-performing loans divided by total loans. M -structure is defined as CR4 in loan market. Other variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and 99th percentiles. Limited by data availability, loan quality data only have a relative short period (note: five years from 2009 to 2013). The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5%, and 10% levels, respectively (two-sided).

	Expected	$NPLoan_{t+1}$		$NPLoan_{t+2}$		$NPLoan_{t+3}$	
	Signs	(1)	(2)	(3)	(4)	(5)	(6)
$GAP_{5YR, t}$	+	0.006** (2.106)		0.005* (1.729)		0.007** (2.104)	
$GAP_{NB, t}$	+		0.008*** (4.339)		0.005** (2.714)		0.004* (1.866)
$\Delta GDP_{t+1/t+2/t+3}$?	0.028 (1.072)	0.015 (0.499)	0.046 (1.446)	-0.016 (-0.567)	-0.008 (-0.327)	-0.017 (-0.618)
$Fiscal_{t+1/t+2/t+3}$?	-0.002 (-0.251)	-0.000 (-0.033)	-0.001 (-0.090)	-0.002 (-0.327)	-0.004 (-0.571)	-0.003 (-0.429)
$Industry_{t+1/t+2/t+3}$	+	0.009 (1.431)	0.013* (1.775)	0.014** (2.362)	0.015** (2.631)	0.011* (1.990)	0.015*** (2.935)
$M\text{-}structure_{t+1/t+2/t+3}$	+	0.003* (1.922)	0.002 (1.162)	0.002 (1.292)	0.001 (0.470)	-0.000 (-0.277)	-0.001 (-0.456)
<i>Intercept</i>		-0.004 (-0.436)	-0.012 (-1.270)	0.002 (0.263)	-0.000 (-0.039)	0.001 (0.137)	0.001 (0.208)
Year		Y	Y	Y	Y	Y	Y
Obs.		114	120	144	150	144	150
R-square		0.404	0.468	0.398	0.437	0.408	0.431

Table 9: Robust check: Excessive credit growth

This table repeated the analysis of table 6 using the excessive credit growth (*ExALoan*) as the dependent variable. *ExALoan* is measured as the ratio of annual growth rate of bank loans to annual growth rate of GDP. Variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and 99th percentiles. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5%, and 10% levels, respectively (two-sided).

	Expected Signs	(1)	(2)	(3)	(4)
<i>GAP_{5YR}</i>	+	0.785*** (2.916)	1.817*** (3.329)		
<i>GAP_{5YR} × NERI</i>	-		-0.462** (-2.304)		
<i>GAP_{NB}</i>	+			0.896** (2.068)	2.450*** (3.987)
<i>GAP_{NB} × NERI</i>	-				-0.603*** (-3.476)
<i>NERI</i>	+		0.363** (2.402)		0.633*** (3.727)
<i>ΔGDP</i>	?	-3.655** (-2.317)	-3.720** (-2.537)	-0.433 (-0.135)	0.406 (0.141)
<i>ΔDeposit</i>	+	6.503*** (10.382)	6.524*** (10.759)	6.146*** (9.538)	6.380*** (10.007)
<i>Branch</i>	+	0.116* (1.967)	0.118** (2.074)	0.102* (1.762)	0.106* (1.912)
<i>SOE</i>	+	0.444 (1.142)	0.375 (0.918)	0.253 (0.687)	0.208 (0.511)
<i>Fiscal</i>	-	-0.169 (-0.573)	-0.212 (-0.719)	-0.105 (-0.316)	-0.167 (-0.503)
<i>Openness</i>	+	0.091* (1.862)	0.104** (2.077)	0.079 (1.491)	0.086 (1.629)
<i>Industry</i>	-	-0.004 (-0.923)	-0.004 (-1.042)	-0.002 (-0.608)	-0.002 (-0.698)
<i>Age</i>	?	0.012* (1.746)	0.011 (1.631)	0.011* (1.798)	0.011* (1.850)
<i>Age60</i>	-	-0.111* (-1.783)	-0.101 (-1.686)	-0.093 (-1.565)	-0.090 (-1.669)
<i>Tenure</i>	?	-0.003 (-0.309)	-0.003 (-0.304)	-0.006 (-0.654)	-0.009 (-0.960)
<i>Promotion</i>	-	-0.046 (-0.840)	-0.058 (-1.100)	-0.048 (-0.967)	-0.053 (-1.160)
<i>Education</i>	+	0.033 (1.051)	0.031 (0.965)	0.032 (1.044)	0.037 (1.192)
<i>Experience</i>	?	-0.062 (-1.263)	-0.053 (-1.142)	-0.062 (-1.170)	-0.041 (-0.861)
<i>Intercept</i>		-2.545** (-2.510)	-3.287*** (-3.021)	-2.966*** (-3.508)	-4.666*** (-5.635)
Year		Y	Y	Y	Y
Obs.		294	294	300	300
R-square		0.759	0.761	0.762	0.771

Table 10: Mid-term political pressure and credit growth

This table reports the results of panel regressions that estimate the impact of political pressure (GAP_{5YR}) on provincial credit growth before the end of each five-year plan period. We restrict our sample to the last two years of the period of a five-year plan. The dependent variable is annual growth rate of the total bank loans ($\Delta Loan$). The key explanatory variable is the $LagGAP_{5YR}$, which is a dummy variable that equals 1 if the average of GAP_{5YR} over the first three years is below the target set in the five-year plan, and 0 otherwise. Variables are defined in Appendix Table A.2, and all continuous variables are winsorized at the 1st and 99th percentiles. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5% and 10% levels separately (two-sided).

	Expected Signs	(1)	(2)
$LagGAP_{5YR}$	+	0.021* (1.725)	0.023* (1.918)
ΔGDP	+	0.506 (1.671)	0.604** (2.183)
$\Delta Deposit$	+	1.017*** (10.369)	1.038*** (9.486)
$Branch$	+	-0.016* (-1.976)	-0.016** (-2.169)
SOE	+	0.048 (0.901)	0.033 (0.677)
$Fiscal$	-	-0.213** (-2.761)	-0.208** (-2.672)
$Openness$	+	0.038** (2.200)	0.037* (1.951)
$Industry$	-	-0.000 (-0.121)	-0.000 (-0.364)
Age	?		0.002 (1.175)
$Age60$	-		-0.032** (-2.083)
$Tenure$?		0.001 (0.638)
$Promotion$	-		-0.009 (-0.701)
$Education$	+		0.005 (0.709)
$Experience$?		-0.013 (-1.171)
$Intercept$		0.148 (1.416)	0.055 (0.354)
Year		Y	Y
Obs.		116	116
R-square		0.833	0.834

Table 11: Change model testing the influence of political pressure

The table repeated the analysis of main tables using the *change model*. In particular, Panel A uses the specification of columns 2 and 4 of Table 4; Panel B repeated the columns 2 and 4 of Table 6; Panel C follows Tables 7; Panel D uses the specification of columns 1 and 2 of Table 8, respectively. Only the key variables are selected and reported in this table and the full results are shown in the Appendix Tables A3 – A5. All continuous variables are converted into change form. We thus lose one year observations due to this. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5% and 10% levels separately (two-sided). Variables are defined in Appendix Table 2 and previous tables.

<i>Panel A: Credit growth</i>						
	Expected Signs	<i>Dep var: Change ΔLoan</i>				
		(1)		(2)		
<i>ChGAP</i> _{SYR}	+	0.138*** (3.413)				
<i>ChGAP</i> _{NB}	+			0.039* (1.852)		
Obs.		264		270		
R-square		0.711		0.701		
<i>Panel B: Credit growth: subsample results</i>						
	Expected Signs	<i>Dep var: Change ΔLoan_{big4}</i>		<i>Dep var: Change ΔLoan_{other}</i>		<i>Dep var: Change ΔLoan_{foreign}</i>
		(1)	(2)	(3)	(4)	(5)
<i>ChGAP</i> _{SYR}	+	0.148*** (3.668)		-0.063 (-0.789)		0.094 (0.952)
<i>ChGAP</i> _{NB}	+		0.032 (1.347)		-0.048 (-1.226)	0.043 (0.381)
Obs.		263	270	260	267	65
R-square		0.713	0.703	0.727	0.721	-0.138
						-0.132
<i>Panel C: Financial marketization</i>						
	Expected Signs	<i>Dep var: Change ΔLoan</i>				
		(1)		(2)		
<i>ChGAP</i> _{SYR}	+	0.194** (2.553)				
<i>ChGAP</i> _{SYR} × <i>NERI</i>	-	-0.030 (-0.854)				
<i>ChGAP</i> _{NB}	+					0.145*** (2.883)
<i>ChGAP</i> _{NB} × <i>NERI</i>	-					-0.046** (-2.384)
<i>NERI</i>	+	0.006* (1.866)				0.007** (2.188)
Obs.		264		270		
R-square		0.711		0.701		

Panel D: Provincial profitability

	Expected Signs	<i>Dep var: Change ΔLoan</i>	
		(1)	(2)
$ChGAP_{5YR}$	+	0.204*** (3.024)	
$ChGAP_{5YR} \times Surplus$	-	-1.337** (-2.110)	
$ChGAP_{NB}$	+		0.077* (1.738)
$ChGAP_{NB} \times Surplus$	-		-0.800*** (-3.122)
$ChSurplus$	+	-0.169 (-1.520)	-0.088 (-0.888)
Obs.		264	270
R-square		0.748	0.739

Panel E: Quality of loans

	Expected Signs	<i>Dep var: Change NPLoan</i>	
		(1)	(2)
$ChGAP_{5YR}$	+	0.003* (1.713)	
$ChGAP_{NB}$	+		0.001 (0.906)
Obs.		114	120
R-square		0.373	0.368

Table A.1: Banking market development by region and year

This table reports the degree of banking market development by province and year. We measure it as the percentage of bank loans issued to non-state-owned enterprises. Data is from the National Economic Research Institute (NERI) Index of the Marketization of China's provinces, which is constructed by Fan et al. (2011).

Province	2002	2003	2004	2005	2006	2007	2008	2009	Average
<i>Eastern regions</i>									
Beijing	5.97	5.84	6.25	5.38	6.73	6.99	11.24	10.98	7.42
Tianjin	6.26	6.32	7.46	7.23	5.62	7.35	11.7	11.47	7.93
Hebei	6.12	7.39	8.41	9.18	10.01	10.58	13.26	13.01	9.75
Fujian	8.56	9.54	10.56	10.73	10.59	11.65	13.92	13.90	11.18
Guangdong	9.49	10.36	10.93	11.30	11.18	11.91	13.97	14.04	11.65
Hainan	6.77	9.22	9.76	11.48	10.72	10.98	13.8	13.81	10.82
Jiangsu	8.35	10.00	10.82	11.43	10.96	11.56	13.85	13.74	11.34
Zhejiang	10.59	11.49	11.41	12.22	12.61	13.15	14.65	14.61	12.59
Shandong	6.41	7.43	8.44	10.11	10.04	10.76	13.51	13.41	10.01
Shanghai	8.88	9.76	9.70	9.78	9.92	9.97	12.94	13.02	10.50
<i>Central regions</i>									
Anhui	5.30	7.07	7.52	7.83	8.73	9.75	13.22	13.18	9.08
Henan	4.23	5.49	6.90	8.06	8.56	9.07	12.6	12.84	8.47
Hubei	1.30	3.90	4.82	6.00	6.99	7.73	12.16	12.39	6.91
Jiangxi	2.41	4.51	5.85	7.74	8.12	9.03	12.83	12.95	7.93
Shanxi	6.08	6.87	7.52	7.22	9.68	9.61	13.2	12.58	9.10
Hunan	4.02	6.58	7.42	8.56	9.03	9.61	13.29	13.26	8.97
<i>Northeastern regions</i>									
Liaoning	5.20	5.75	6.78	8.02	8.92	10.23	13.32	13.47	8.96
Jilin	0.77	2.40	3.71	2.69	2.92	5.94	10.83	11.50	5.10
Heilongjiang	0.88	2.92	3.68	4.57	5.08	6.14	10.97	11.51	5.72
<i>Western regions</i>									
Inner-Mongolia	3.17	5.05	6.09	7.92	8.25	8.94	12.38	13.06	8.11
Guangxi	4.41	4.90	5.82	8.78	10.08	10.21	13.46	12.92	8.82
Chongqing	6.33	8.31	9.20	9.31	9.91	10.14	12.67	11.88	9.72
Sichuan	6.68	7.89	8.56	8.75	9.22	10.58	4.17	13.14	8.62
Guizhou	2.07	4.53	4.66	5.99	6.57	7.91	11.94	12.31	7.00
Yunnan	3.83	5.39	7.61	8.41	10.07	10.05	13.09	12.87	8.92
Shaanxi	4.62	5.73	7.18	7.92	8.28	7.85	11.78	12.03	8.17
Gansu	2.61	3.57	4.29	4.85	5.57	7.35	11.50	12.28	6.50
Qinghai	5.14	7.37	7.76	10.01	8.62	8.85	12.45	12.76	9.12
Ningxia	4.59	7.39	9.17	10.13	9.46	10.15	12.84	13.11	9.61
Xinjiang	5.17	7.09	7.53	7.19	7.71	7.67	11.79	11.93	8.26

Table A.2: Variable definitions

Variable name	Notation	Definition
Main Dep. Variable		
Credit growth	$\Delta Loan$	Annual growth rate of the total bank loans.
Other Dep. Variables		
Excessive credit growth	$Ex\Delta Loan$	Estimated as $\Delta Loan$ over ΔGDP , and then minus 1. ΔGDP is the annual growth rate of provincial GDP.
Non-perform loans	$NPLoan$	The amount of non-perform loans divided by the amount of total loan.
Indep. Variables		
Shortfall of GDP growth to target growth rates	GAP_{5YR}	The target GDP growth rate set in province's five-year plan divided by the actual GDP growth rate, and then minus 1.
Shortfall of GDP growth to neighbour's growth rate	GAP_{NB}	Average GDP growth rate of adjacent provinces divided by the actual GDP growth rate, and then minus 1.
Control Variables		
GDP growth	ΔGDP	Annual growth rate of GDP.
Deposit growth	$Deposit$	Annual growth rate of the total deposits.
No. of bank branches	$Branch$	The logarithm of the number of bank branches.
Percent of state-owned economy	SOE	The ratio of revenues from state-owned enterprises to those from all enterprises in each province.
Fiscal decentralization	$Fiscal$	(Local fiscal expenditure per capita/central and local fiscal expenditure per capita) * [1-(provincial GDP/national GDP)]
Economic openness	$Openness$	The sum of exports and imports divided by GDP.
Industry structure	$Industry$	The value created by the secondary industry divided by GDP.
Age of provincial leaders	Age	The age of the provincial committee secretary.
Provincial leaders is 60 or older	$Age60$	A dummy variable that equals 1 if the provincial committee secretary is 60 or older, and 0 otherwise.
Tenure of provincial leaders	$Tenure$	The number of years the provincial committee secretary has been in the post.
Promotion of provincial leaders	$Promotion$	A dummy variable that equals 1 if the provincial committee secretary was promoted from inner-provincial governments.
Education background of provincial leaders	$Education$	The education level of the provincial committee secretary: PhD = 3, Master = 2, Bachelor = 1, and zero otherwise.
Economics expertise of provincial leaders	$Experience$	A dummy variable that equals 1 if the provincial committee secretary held a post in provincial or higher levels of the National Development and Reform Commission, Economic and Trade Commission, People's Bank of China, China Securities Regulatory Commission, China Banking Regulatory Commission, or China Insurance Regulatory Commission, and 0 otherwise.

Table A.3: Change model for credit growth

This table presents regression results on the impact of political pressure on credit growth basing on change model. The observation unit is province-year. All variables in this table are change form. We loss one year observations due to get change form. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5% and 10% levels separately (two-sided).

	Expected Signs	<i>Dep var: Change ΔLoan</i>			
		(1)	(2)	(3)	(4)
<i>ChGAP_{5YR}</i>	+	0.138*** (3.413)	0.194** (2.553)		
<i>ChGAP_{5YR} × NERI</i>	-		-0.030 (-0.854)		
<i>ChGAP_{NB}</i>	+			0.039* (1.852)	0.145*** (2.883)
<i>ChGAP_{NB} × NERI</i>	-				-0.046** (-2.384)
<i>NERI</i>	+		0.006* (1.866)		0.007** (2.188)
<i>ChΔGDP</i>	?	0.000 (0.127)	0.001 (0.287)	0.000 (0.014)	0.001 (0.250)
<i>ChΔDeposit</i>	+	0.689*** (6.618)	0.697*** (6.761)	0.626*** (5.448)	0.640*** (5.653)
<i>ChBranch</i>	+	-0.004 (-1.682)	-0.005** (-2.230)	-0.004* (-1.756)	-0.006** (-2.267)
<i>ChSOE</i>	+	0.059 (0.622)	0.051 (0.570)	0.085 (0.832)	0.080 (0.845)
<i>ChFiscal</i>	-	-0.003 (-0.074)	0.010 (0.202)	0.024 (0.512)	0.028 (0.615)
<i>ChOpenness</i>	+	0.000 (0.079)	0.001 (0.177)	-0.004 (-0.748)	-0.003 (-0.485)
<i>ChIndustry</i>	-	0.004* (1.715)	0.004* (1.748)	0.004 (1.462)	0.004 (1.538)
<i>Age</i>	?	0.001* (1.718)	0.001 (1.306)	0.002** (2.198)	0.001 (1.604)
<i>Age60</i>	-	-0.011 (-1.247)	-0.010 (-1.136)	-0.014 (-1.627)	-0.012 (-1.330)
<i>Tenure</i>	?	0.000 (0.367)	0.001 (0.659)	0.000 (0.351)	0.001 (0.652)
<i>Promotion</i>	-	-0.005 (-0.795)	-0.007 (-0.969)	-0.006 (-0.930)	-0.008 (-1.065)
<i>Education</i>	+	0.001 (0.422)	0.001 (0.474)	0.002 (0.853)	0.002 (0.803)
<i>Experience</i>	?	0.004 (0.717)	0.005 (0.892)	0.003 (0.480)	0.005 (0.809)
<i>Intercept</i>		-0.089** (-2.132)	-0.077* (-1.730)	-0.102** (-2.370)	-0.082* (-1.739)
Year		Y	Y	Y	Y
Obs.		264	264	270	270
R-square		0.711	0.712	0.701	0.704

Table A.4: Change model for lending behaviour

This table presents regression results on the impact of political pressure on lending behavior basing on change model. The observation unit is province-year. All variables in this table are change form. We loss one year observations due to get change form. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5% and 10% levels separately (two-sided).

	Expected Signs	<i>Dep var: Change ΔLoan</i>	
		(1)	(2)
$ChGAP_{5YR}$	+	0.204*** (3.024)	
$ChGAP_{5YR} \times Surplus$	-	-1.337** (-2.110)	
$ChGAP_{NB}$	+		0.077* (1.738)
$ChGAP_{NB} \times Surplus$	-		-0.800*** (-3.122)
$ChSurplus$	+	-0.169 (-1.520)	-0.088 (-0.888)
$Ch\Delta GDP$	+	0.941** (2.136)	0.358 (0.822)
$Ch\Delta Deposit$	+	0.805*** (8.484)	0.778*** (7.856)
$ChSOE$	+	0.095 (0.973)	0.123 (1.167)
$ChIndustry$	-	0.003 (1.267)	0.002 (0.963)
<i>Intercept</i>		-0.069*** (-7.477)	-0.074*** (-7.469)
Year		Y	Y
Obs.		264	270
R-square		0.748	0.739

Table A.5: Change model for non-performing loan

This table presents regression results on the impact of political pressure on non-performing loan basing on change model. The observation unit is province-year. All variables in this table are change form. We loss one year observations due to get change form. The numbers reported in the parentheses are clustered by province. ***, **, and * indicate significant difference at the 1%, 5% and 10% levels separately (two-sided).

	Expected Signs	<i>Dep var: Change NPLoan</i>	
		(1)	(2)
<i>ChGAP_{5YR}</i>	+	0.003* (1.713)	
<i>ChGAP_{NB}</i>	+		0.001 (0.906)
<i>ChΔGDP</i>	?	-0.028 (-1.318)	-0.017 (-0.865)
<i>ChFiscal</i>	?	-0.002 (-0.556)	-0.002 (-0.536)
<i>ChIndustry</i>	+	0.000 (0.304)	0.000 (0.209)
<i>ChM-structure</i>	+	-0.001*** (-3.443)	-0.001*** (-3.797)
<i>Intercept</i>		-0.001** (-2.674)	-0.001** (-2.515)
Year		Y	Y
Obs.		114	120
R-square		0.373	0.368

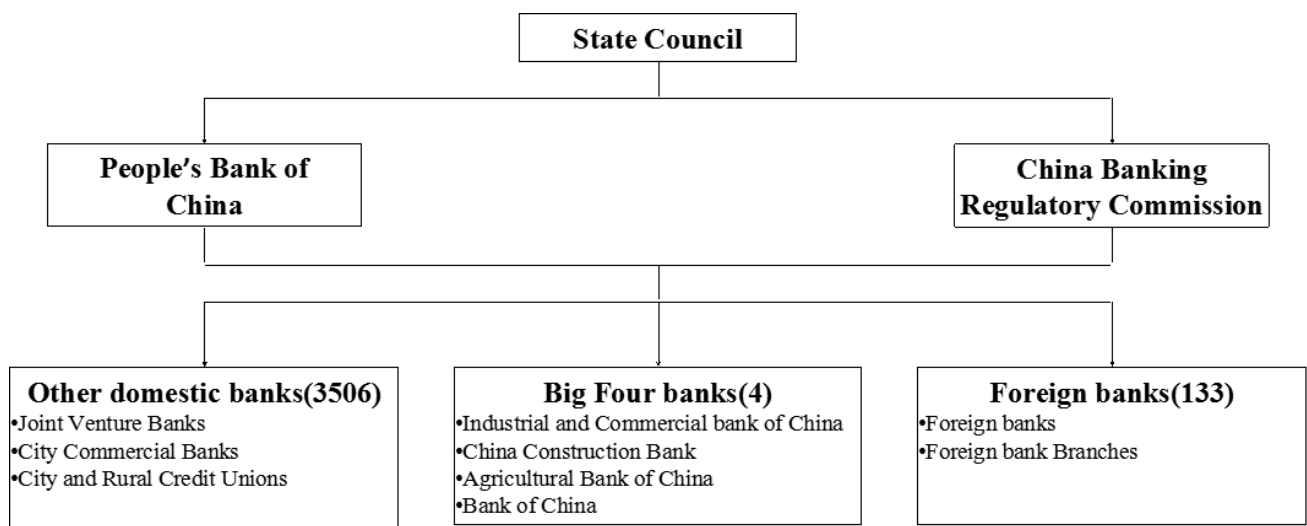


Figure 1: Structure of China's commercial banks
Data source: China Banking Regulatory Commission (2011)